Objective

To assess the candidate's technical, strategic, and leadership skills required for the CTO role at RNS.ID.

Section 1: Strategic Vision and Leadership

1. **Develop a Technical Roadmap:**

   1. Create a 12-month technical roadmap for RNS.ID's decentralized identity platform.

   2. Include key milestones, technology stacks, and integration strategies.

   3. Present how this roadmap aligns with RNS.ID's mission to provide secure, scalable, and user-friendly identity solutions.

2. **Team Structure and Growth:**

   1. Propose an organizational structure for the engineering team at RNS.ID.

   2. Identify gaps in the current team and propose a hiring plan focused on Web3 and blockchain expertise.

   3. Suggest initiatives for upskilling the team to maintain leadership in decentralized identity technology.

   Note: Candidates should assume hypothetical scenarios about the team's current structure and needs.

Section 2: Technical Expertise

3. **Architecture Review Task:**

   1. Review the architecture of a decentralized identity solution.

   2. Identify potential scalability and security issues specific to identity management.

   3. Propose improvements with justifications.

   Note: Candidates should base their analysis on hypothetical assumptions about the platform's architecture

4. **Code Assessment:**

   1. Review a provided code snippet from a smart contract managing decentralized identifiers (DIDs) in Solidity.

   2. Identify vulnerabilities, inefficiencies, and adherence to best practices for identity related smart contracts.

   3. Suggest improvements with reasoning.

   Note: Candidates should assume the provided smart contract details are hypothetical and they should image a plausible scenario where they are reviewing a smart contract.

5. **Integration Task:**

   1. Propose a design for integrating a new blockchain protocol or DID standard into RNS.ID's platform.

   2. Highlight trade-offs, decision-making processes, and alignment with the company's goals.

Section 3: Innovation and Problem-Solving

6. **Decentralized Identity Trends:**

   1. Analyze a recent trend or technology in the decentralized identity space.

   2. Present how RNS.ID can leverage it for competitive advantage.

   3. Include potential challenges and mitigation strategies.

7. **Crisis Management:**

   1. Present a plan for addressing a hypothetical critical issue, such as a major DID registry exploit or blockchain network outage affecting identity services.

   2. Include technical, operational, and communication strategies.

Section 4: Communication and Stakeholder Management

8. **Stakeholder Presentation:**

   1. Prepare a presentation for non-technical stakeholders explaining the value proposition of a new decentralized identity initiative.

   2. Ensure the presentation is accessible yet insightful, focusing on how it aligns with RNS.ID's mission and business impact.

9. **Technical Blog Post:**

   1. Write a short blog post explaining a complex decentralized identity concept (e.g., DID interoperability, privacy in identity management) in a way that is understandable to a broad audience.

Section 5: Culture Fit and Vision

10. **Cultural Assessment:**

    1. Provide a one-page vision statement for RNS.ID's engineering culture.

    2. Explain how you would foster collaboration, innovation, and accountability within the team.

11. **Diversity and Inclusion:**

    1. Propose actionable steps to improve diversity and inclusion within the RNS.ID engineering team.

Evaluation Criteria

- Strategic thinking and alignment with RNS.ID's goals.

- Depth of technical knowledge and problem-solving skills specific to decentralized identity.

- Communication clarity and stakeholder engagement.

- Cultural and leadership vision.

Notes:

This trial task document is designed to evaluate the candidate's ability to lead the technical direction of RNS.ID effectively while fostering a collaborative and innovative engineering environment.